

### AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

Please cancel Claim 1 without prejudice. Applicants reserve the right to pursue the subject matter recited in Claim 1 in further applications.

Please add new claims 2-47.

1. Cancelled
2. (New) An illumination module, comprising:  
a dielectric layer having first and second sides;  
a plurality of light emitting diodes (LEDs);  
a plurality of electrically-conductive contacts on the first side of the dielectric layer, each of the plurality of contacts being configured to mount an LED such that the plurality of LEDs are electrically connected;  
a heat conductive body on the second side of the dielectric layer;  
a heat conductive surface in communication with the heat conductive body, the heat conductive surface having a surface area substantially greater than a surface area of the heat conductive body;  
wherein heat from the LEDs is communicated through the contacts, dielectric layer, and heat conductive body to the heat conductive surface.
3. (New) The illumination module of Claim 2, comprising a heat conductive tab, and the tab comprises the heat conductive surface.
4. (New) The illumination module of Claim 3, wherein the heat conductive tab behaves as a heat sink.
5. (New) The illumination module of Claim 2, wherein heat is dissipated from the heat conductive surface to the surrounding environment.
6. (New) The illumination module of Claim 2, wherein the heat conductive body is generally flat.
7. (New) The illumination module of Claim 6, wherein the contacts are substantially flat and coplanar relative to each other.
8. (New) The illumination module of Claim 7, wherein the body is substantially parallel to the contacts.

9. (New) The illumination module of Claim 8, wherein the heat conductive surface is substantially complementary to a surface of the heat conductive body.

10. (New) The illumination module of Claim 9, comprising a heat conductive tab, and the tab comprises the heat conductive surface.

11. (New) The illumination module of Claim 10, wherein the heat conducting tab behaves as a heat sink.

12. (New) The illumination module of Claim 9, wherein the heat conductive surface has a thermal conductivity greater than about 100 W/mK.

13. (New) The illumination module of Claim 12, wherein the heat conductive surface comprises a metal.

14. (New) The illumination module of Claim 13, wherein the heat conductive surface comprises aluminum.

15. (New) The illumination module of Claim 12, wherein the body has a thermal conductivity greater than about 100 W/mK.

16. (New) The illumination module of Claim 12, wherein the heat conductive surface is substantially rigid.

17. (New) The illumination module of Claim 9, wherein the dielectric member is substantially planar.

18. (New) The illumination module of Claim 9, wherein the heat conductive surface is significantly larger than a surface of the heat conductive body.

19. (New) The illumination module of Claim 2, wherein each of the LEDs comprises a lead, and the leads are configured to be mounted to respective contacts.

20. (New) A method of making an illuminated display, comprising:  
providing a housing having at least one wall surface;  
providing a plurality of the illumination modules of Claim 2; and  
mounting the plurality of illumination modules onto the at least one wall surface.

21. (New) The method of Claim 20, wherein the illumination modules comprise a heat conductive tab, and the tab comprises the heat conductive surface.

22. (New) The method of Claim 21 additionally comprising mounting an illumination module so that at least a portion of the heat conductive tab is not in contact with the housing wall surface.

23. (New) An illumination apparatus, comprising  
a housing;  
a heat conductive surface arranged in an interior of the housing; and  
an illumination module mounted on the heat conductive surface, the illumination module comprising:  
a dielectric having a first side and a second side;  
at least two light emitting diodes (LEDs);  
a plurality of electrically conductive contacts on the first side of the dielectric, each of the plurality of contacts being configured to mount a lead of an LED such that the LEDs are electrically connected; and  
a heat conductive body on the second side of the dielectric;  
wherein heat from the LEDs flows through the contacts and dielectric to the heat conductive body, and from the body to the heat conductive surface.
24. (New) The apparatus of Claim 23, wherein the heat conductive surface is significantly larger than a surface of the heat conductive body.
25. (New) The apparatus of Claim 23, wherein the heat conductive body contacts the heat conductive surface.
26. (New) The apparatus of Claim 23, wherein the housing comprises a wall surface, and the heat conductive surface is attached to the wall surface.
27. (New) The apparatus of Claim 23, wherein the heat conductive body is substantially flat.
28. (New) The apparatus of Claim 27, comprising a heat conductive tab comprising the heat conductive surface.
29. (New) The apparatus of Claim 28, wherein the heat conductive tab is larger than the heat conductive body.
30. (New) The apparatus of Claim 29, wherein the heat conductive surface is substantially flat.
31. (New) The apparatus of Claim 29, wherein the heat conductive tab comprises a material having a thermal conductivity greater than about 100 W/mK.
32. (New) The apparatus of Claim 28, wherein the housing comprises a wall surface, and at least a portion of the heat conductive surface is spaced from the wall surface.

33. (New) The apparatus of Claim 32, wherein the heat conductive surface is configured to draw LED-generated heat from the module for dissipation in the housing.

34. (New) The apparatus of Claim 23, wherein the housing comprises a plurality of wall surfaces that define a channel.

35. (New) The apparatus of Claim 34, wherein a translucent cover extends over the channel.

36. (New) The apparatus of Claim 35, wherein heat from the LEDs is drawn to the heat conductive surface and dissipated from the surface into the channel.

37. (New) The apparatus of Claim 23, wherein the housing comprises a wall surface, and the wall surface comprises the heat conductive surface.

38. (New) The apparatus of Claim 37, wherein the wall surface comprises metal.

39. (New) An illumination module for mounting on a heat conducting surface that is larger than the module, the module comprising:

- a heat conductive body having a first side and a second side;

- a thin dielectric portion on a first side of the heat conductive body;

- a plurality of light emitting diodes (LEDs); and

- a plurality of electrically-conductive contacts on a first side of the dielectric portion, the LEDs being mounted to the contacts such that the LEDs are electrically connected to one another, the contacts thermally communicating with the dielectric portion through a thermal communication area between the contacts and the first side of the dielectric portion;

- wherein a second side of the dielectric portion is arranged on the first side of the heat conductive body so that the first side of the body is in thermal communication with the contacts through the dielectric portion; and

- wherein the first side of the body has a surface area larger than the thermal communication area, and the second side of the body has a surface generally complementary to the heat conducting surface to provide thermally conductive contact with the heat conducting surface;

- whereby heat is thermally conducted from the LEDs to the heat conducting surface.

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40. (New) The illumination module of Claim 39, wherein the second side of the body has a generally flat surface.

41. (New) The illumination module of Claim 40, wherein the contacts are substantially flat and coplanar relative to each other.

42. (New) The illumination module of Claim 41, wherein a first side of the body is substantially flat and parallel to the contacts.

43. (New) The illumination module of Claim 42, wherein the dielectric portion is substantially flat.

44. (New) The illumination module of Claim 39, wherein the heat conductive body has a thermal conductivity greater than about 100 W/mK.

45. (New) The illumination module of Claim 39, wherein the heat conductive surface has a thermal conductivity greater than about 100 W/mK.

46. (New) The illumination module of Claim 39, comprising a heat conductive tab that comprises the heat conductive surface.

47. (New) The illumination module of Claim 46, wherein the heat conductive tab is larger than the heat conductive body.